MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Firestone Building Products Company, LLC
250 West 96th Street
Indianapolis, IN 46260

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Firestone UltraPly TPO & TPO XR Single Ply Roof Systems over Steel Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews and revises NOA No. 09-09029 and consists of pages 1 through 63.
The submitted documentation was reviewed by Jorge L. Acebo.

MIAMI-DADE COUNTY APPROVED

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply Roofing
Material:	TPO
Deck Type:	Steel
Maximum Design Pressure	-150 psf

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specifications	Product Description
UltraPly TPO	Various	TAS 131-95	Reinforced TPO 045” to 080” thick membrane.
UltraPly TPO XR 100	Various	TAS 131-95	Reinforced Fleece-backed TPO.
UltraPly TPO XR 115	Various	TAS 131-95	Reinforced Fleece-backed TPO.
UltraPly TPO Reinforced Curb Corner	Various	TAS 131-95	TPO curb flashing.
UltraPly 18" Curb Flashing	Various	TAS 131-95	TPO curb flashing.
UltraPly TPO Inside/Outside Corner	Various	TAS 131-95	Molded TPO for corner flashing.
Ultraply TPO Large Pipe Flashing	Various	TAS 131-95	TPO flashing for large round penetrations.
UltraPly TPO T-Joint Cover	Various	TAS 131-95	TPO flashing for T-joints.
UltraPly TPO Penetration Kit	Various	TAS 131-95	A penetration sealing kit for UltraPly TPO.
UltraPly TPO Walkway Pad	Various	TAS 131-95	TPO walkway pad.
UltraPly TPO Coated Metal	Various	TAS 131-95	TPO laminated to hot-dipped galvanized steel for flashing.
UltraPly TPO Premium Walkway Pad	Various	TAS 131-95	TPO walkway pad.
UltraPly TPO Reinforced Split Pipe Boot	Various	TAS 131-95	TPO flashing for round penetrations 1" to 9" in diameter.
UltraPly TPO 8" Reinforced Cover Strip	Various	TAS 131-95	8" wide 60 mil TPO cover strip.
UltraPly TPO Universal Pipe Boot	Various	TAS 131-95	TPO flashing for round penetrations 1" to 6" in diameter.
UltraPly TPO Unsupported Flashing	Various	TAS 131-95	Unreinforced TPO used for flashing.

MB Base SA	39.4” x 99.7’	ASTM D 5147	Fiberglass reinforced base sheet, asphalt coated on both sides with a plastic release film on the underside.
TPO QuickSeam Flashing	5-3/4” x 100’	TAS 131-95	Flashing material with pre-applied adhesive.
UltraPly QuickSeam R.M.A. Strip	10” x 100’		Strip of UltraPly TPO with QuickSeam Tape for anchoring membrane to substrate.
Single-Ply QuickPrime Primer	1 gallon & 3 gallon	Proprietary	Primer for TPO QuickSeam Flashing.
EdgeGard System	Various	Various	Flashing materials and assemblies
XR Stick Membrane Adhesive	5 gal. pail	Proprietary	A low-rise polyurethane, low VOC, membrane adhesive.
UltraPly Bonding Adhesive	5 gal. pail	Proprietary	Solvent based adhesive.
I.S.O. Stick	5 gal & 1500 ml	Proprietary	A dual component polyurethane adhesive.
I.S.O. Twin Pack Insulation Adhesive	1500 ml	Proprietary	A dual component polyurethane adhesive.
I.S.O. Fix II	30 lbs.	Proprietary	A single component polyurethane adhesive.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ISO 95+ GL, ISO 95+ GL Tapered	Polyisocyanurate foam insulation	Firestone Bldg. Products
FiberTop E	Wood fiber insulation board	Firestone Bldg. Products
ISOGARD HD	Polyisocyanurate with a coated fiberglass facer	Firestone Bldg. Products
ISOGARD HD Composite	Polyisocyanurate with a coated fiberglass facer composite insulation.	Firestone Bldg. Products
High Density Wood Fiber	Non-Asphaltic fiberboard Insulation	Generic
Georgia-Pacific High Density Roof Fiberboard	Non-Asphaltic fiberboard Insulation	Georgia-Pacific Wood Products, LLC
DensDeck, DensDeck Prime	Silicon treated gypsum	Georgia Pacific Gypsum LLC
RESISTA	Polyisocyanurate foam core laminated to a coated fiberglass facer	Firestone Bldg. Products
SECUROCK Glass-Mat	Gypsum fiber roof board with fiberglass facer	USG Corporation
SECUROCK Gypsum-Fiber	Gypsum fiber roof board	USG Corporation

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Heavy Duty Fastener	#15 Fastener for steel, Wood, concrete decks	N/A	Firestone Bldg. Products
2.	All Purpose Fastener	#14 Fastener for steel, Wood, concrete decks	N/A	Firestone Bldg. Products
3.	2-3/8" Barbed Seam Plate	Membrane seam attachment plate	2-3/8" diameter	Firestone Bldg. Products
4.	Pre-Assembled fastener & plate	#14 w/insulation plate for steel, Wood, concrete decks	N/A	Firestone Bldg. Products
5.	Pre-Assembled Heavy Duty fastener & plate	#15 w/insulation plate for steel, Wood, concrete decks	N/A	Firestone Bldg. Products
6.	Heavy Duty Plus Fastener	Insulation and membrane fastener	Various	Firestone Bldg. Products
7.	Insulation Fastening Plate	Galvalume insulation plate	3" diameter	Firestone Bldg. Products
8.	HD HailGard Fasteners	Insulation and membrane fasteners	Various	Firestone Bldg. Products
9.	HD Seam Plates	AZ55 or AZ50 galvalume insulation plate.	2-3/8" diameter	Firestone Bldg. Products
10.	HD Plus Seam Plate	Galvalume insulation plate	2¾" diameter	Firestone Bldg. Products
11.	Metal Batten Bar	Galvalume AZ55 batten strip	10' long, 1" wide	Firestone Bldg. Products
12.	Coiled Metal Batten Bar	Galvalume AZ55 batten strip	220' long, 1" wide	Firestone Bldg. Products
13.	Polymer Batten Strips	Polymer, corrosion –free, batten strip.	250' long, ¾" or 1" wide	Firestone Bldg. Products
14.	UltraPly TPO InvisiWeld Plates	High-performance TPO membrane fastening system	3" diameter	Firestone Bldg. Products

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Underwriters Laboratories Inc.	01NK17982	UL790	06/05/01
	00NK43467	UL790	01/22/01
	03NK34486	UL790	03/22/05
Factory Mutual Research Corporation	3006983	4470	02/08/00
	3004249	4470	11/03/99
	3003830	4470	05/26/99
	3001925	4470	05/24/99
	3014031	4470	07/22/02
	3014918	4470	12/17/03
	3012931	4470	04/04/04
	3016670	4470	04/29/04
	3017120	4470	04/30/04
	3020394	4470	09/03/04
	3022988	4470	01/28/05
	3029384	4470	06/07/10
	3027508	4470	02/07/07
	3026519	4470	12/14/06
	3026520	4470	12/14/06
	3030650	4470	08/30/10
	3019991	4470	09/20/05
	3033218	4470	08/12/08
	3030227	4470	06/18/07
	3033921	4470	01/12/09
	3035560	4470	01/11/10
	3039133	4470	04/07/11
	3035017	4470	04/15/09
	3036747	4470	02/12/10
	3040535	4470	10/05/10
	3038546	4470	12/17/10
	3038191	4470	08/04/11
Trinity¦ERD	F896048	TAS 114-F	04/15/08
	F8300.118-R3	TAS 131/ASTM D6878	02/25/11
PRI Construction Materials Technologies, LLC	FBP-085-02-01, R1	TAS 114 J	10/04/12
	FBP-086-02-01	TAS 114 J	10/04/12
	FBP-044-02-01, R2	TAS 114 H, J	10/04/12

APPROVED ASSEMBLIES:

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fastener installed at each bearing attachment point) and Traxx 1 fasteners 12" o.c. at the side laps.

System Type B(1): Membrane fully adhered over mechanically fastened insulation. Side laps are sealed with a min 1.5" heat weld.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer (Thermal Barrier)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Prime Minimum 5/8" thick	**1 or 2 with 7**	**1:2ft^2**

Thermal Barrier: Primed with SA Primer roller applied at a rate of 200 ft^2/gallon.

Vapor Retarder: MB Base SA is self-adhered to the primed thermal barrier.

Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Tapered ISO 95+ GL Minimum ½" thick with a ¼" per ft. taper	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. All other layers of insulation shall be adhered to the MB Base SA with I.S.O. Twin Pack Insulation Adhesive in ½" – ¾" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with Firestone UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fastener installed at each bearing attachment point) and Traxx 1 fasteners 12" o.c. at the side laps.

System Type B(2): Membrane fully adhered over mechanically fastened insulation. Side laps are sealed with a min 1.5" heat weld.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**1 or 2 with 7**	**1:2ft^2**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Tapered ISO 95+ GL Minimum ½" thick with a ¼" per ft. taper	**N/A**	**N/A**

Note: Base insulation layer shall be mechanically attached with fasteners and density described. Top insulation layer shall be adhered to the ISO 95+ GL with I.S.O. Twin Pack Insulation Adhesive in ½" – ¾" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: Firestone UltraPly TPO membrane fully adhered to the top insulation layer with Firestone UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft^2/gallon to both the underside of membrane and the substrate). The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fastener installed at each bearing attachment point) and Traxx 1 fasteners 12" o.c. at the side laps.

System Type B(3): Membrane adhered over mechanically fastened insulation. Side laps are sealed with a min 1.5" heat weld.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**1 or 2 with 7**	**1:2 ft^2**
Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1" thick**	**N/A**	**N/A**
(Optional) Additional Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1" thick**	**N/A**	**N/A**
Tapered ISO 95+ GL **Minimum ½" thick with a ¼" per ft. taper**	**N/A**	**N/A**
Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FiberTop E **Minimum ½" thick**	**N/A**	**N/A**
DensDeck Prime **Minimum ¼" thick**	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. All other layers of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or I.S.O. Fix II, or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fastener installed at each bearing attachment point) and Traxx 1 fasteners 12" o.c. at the side laps.

System Type B(4): Membrane adhered over mechanically fastened insulation. Side laps are sealed with a min 1.5" heat weld.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL		
Minimum 1.5" thick	**1 or 2 with 7**	**1:2 ft^2**
Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL		
Minimum 1" thick	**N/A**	**N/A**
(Optional) Additional Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft2**
ISO 95+ GL		
Minimum 1" thick	**N/A**	**N/A**
Tapered ISO 95+ GL		
Minimum ½" thick with a ¼" per ft. taper	**N/A**	**N/A**
Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD		
Minimum ½" thick	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. All other layers of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or I.S.O. Fix II, or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 adhered with XR Stick Membrane Adhesive applied in continuous 1" minimum beads spaced a maximum of 4" o.c. and allowed to expand to full coverage application prior to placement of the roof cover. The 2" wide roof cover side laps are sealed with a minimum 1.5 in. heat weld placed on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fastener installed at each bearing attachment point) and Traxx 1 fasteners 12" o.c. at the side laps.

System Type B(5): Membrane fully adhered over mechanically fastened insulation. Side laps are sealed with a min 1.5" heat weld.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**1 or 2 with 7**	**1:2 ft^2**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD Minimum ½" thick	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO is fully adhered to the top insulation layer with UltraPly Bonding Adhesives roller applied at a rate of 60 ft^2/gallon (120 ft^2/gallon to both the underside of membrane and the substrate). The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type B(6): Membrane adhered over mechanically fastened insulation. Side laps are sealed with a min 1.5" heat weld.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**1 or 2 with 7**	**1:1.6 ft^2**
Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Prime Minimum ½" thick	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 6" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 6 o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 6" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type B(7): Membrane adhered over mechanically fastened insulation. Side laps are sealed with a min 1.5" heat weld.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 2" thick	**1 or 2 with 7**	**1:1.6 ft^2**
Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1" thick	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 6" o.c., I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 6" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 6" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -75 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fastener installed at each bearing attachment point) and Traxx 1 fasteners 12" o.c. at the side laps.

System Type B(8): Membrane fully adhered over mechanically fastened insulation. Side laps are sealed with a min 1.5" heat weld.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL		
Minimum 2" thick	**1 or 2 with 7**	**1:1 ft^2**
Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD		
Minimum ½" thick	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft^2 /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -90 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fastener installed at each bearing attachment point) and Traxx 1 fasteners 24 o.c. at the side laps.

System Type B(9): Membrane adhered over mechanically fastened insulation. Side laps are sealed with a min 1.5" heat weld.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 2" thick	**1 or 2 with 7**	**1:1 ft^2**
Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Prime Minimum ½" thick	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 4" o.c., I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 4" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 4" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -127.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga. (0295") minimum steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fasteners installed at each bearing attachment point) and Traxx 1 fasteners 12" o.c. at the side laps.

System Type B(10): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 2" thick	**1 & 7 or 2 & 7**	**1:1 ft^2**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD Minimum 1/2" thick	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -90 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga. (0295") minimum steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fasteners installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type B(11): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
RESISTA Minimum 1.5" thick	**1 & 7 or 2 & 7**	**1:1 ft^2**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
RESISTA Minimum 1.5" thick	**N/A**	**N/A**

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -120 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners and ¾" washers spaced 6" o.c. (two fasteners installed at each bearing attachment point) and Traxx 1 fasteners 12" o.c. at the side laps

System Type B(12): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1" thick**	**N/A**	**N/A**
Tapered ISO 95+ GL **Minimum ½" thick with a ¼" per ft. taper**	**N/A**	**N/A**

Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 2-1/4" thick**	**1 or 2 with 7**	**1:4 ft^2**

Note: Optional Base layer shall be loose laid. Middle layer shall be simultaneously fastened with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**

Note: Optional top layer shall be adhered to top insulation with I.S.O. Twin Pack Insulation Adhesive in continuous ½" – ¾" wide beads spaced 12" o.c. or, I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" – 1" wide ribbons spaced 12" o.c.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fasteners installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(1): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD, FiberTop E **Minimum ½" thick**	**14 and 1**	**1:5.3 ft^2**
DensDeck, DensDeck Prime **Minimum ¼" thick**	**14 and 1**	**1:5.3 ft^2**
Plywood **Minimum 19/32" thick**	**14 and 1**	**1:5.3 ft^2**

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(2): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
FiberTop E, ISOGARD HD **Minimum ½" thick**	**14 and 1**	See Design Pressure
DensDeck, DensDeck Prime **Minimum ¼" thick**	**14 and 1**	See Design Pressure
Plywood **Minimum 19/32" thick**	**14 and 1**	See Design Pressure

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 3 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure:	Maximum Pressure	Fastener Spacing	Fastener Row Spacing
	-45 psf. (See General Limitation #7)	12 in.	5 ft.

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(3): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD Minimum ½" thick	**1 or 2 with 7**	**1:2.7ft^2**

Membrane: UltraPly TPO roof cover is fully adhered to insulation with UltraPly Bonding Adhesives roller applied at a rate of 60 ft^2/gallon (120 ft^2/gallon to both the underside of membrane and the substrate). The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: –45 psf. (See General Limitation #9)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(4): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD Minimum 1" thick	**1&7 or 2&7**	**1: 1.8 ft^2**

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft^2 /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fasteners installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps

System Type C(5): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.2" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Plywood Minimum 19/32" thick	**8**	**1:1.6 ft^2**

Membrane: UltraPly TPO membrane fully adhered to the cover board with UltraPly Bonding Adhesive at a rate of 60 sq.ft./gal per side. (Coverage area is for adhesive application onto each of the two mating surfaces). The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(6): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL		
Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD		
Minimum ½" thick	**1&7 or 2&7**	**1: 1.33 ft^2**

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft^2 /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(7): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD Composite Minimum 1" thick	**1&7 or 2&7**	**1: 1.33 ft^2**

Note: Insulation layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft^2 /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge Grade C steel deck secured to supports space a maximum 6' o.c. with ITW Buildex Traxx/5 spaced 6" o.c. Side laps fastened with ITW Buildex Traxx/1 spaced 24" o.c.

System Type C(8): All layers of insulation simultaneously attached, membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD Composite Minimum 1.5" thick	**1&7 or 2&7**	**1: 1.78 ft^2**

Note: Insulation shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Barrier: None.

Membrane: UltraPly TPO membrane fully adhered to the cover board with UltraPly Bonding Adhesive at a rate of 60 sq.ft./gal per side. (Coverage area is for adhesive application onto each of the two mating surfaces). The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 30" o.c. at the side laps.

System Type C(9): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD, FiberTop E **Minimum ½" thick**	**14 and 1**	**1:4 ft^2**
DensDeck, DensDeck Prime **Minimum ¼" thick**	**14 and 1**	**1:4 ft^2**
Plywood **Minimum 19/32" thick**	**14 and 1**	**1:4 ft^2**

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge Grade C steel deck secured to supports space a maximum 6' o.c. with ITW Buildex Traxx/5 spaced 6" o.c. Side laps fastened with ITW Buildex Traxx/1 spaced 24" o.c.

System Type C(10): All layers of insulation simultaneously attached, membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Plywood Minimum 19/32" thick	**1&7 or 2&7**	**1:2 ft^2**

Barrier: None.

Membrane: UltraPly TPO membrane fully adhered to the cover board with UltraPly Bonding Adhesive at a rate of 60 sq.ft./gal per side. (Coverage area is for adhesive application onto each of the two mating surfaces). The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -75 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 30" o.c. at the side laps.

System Type C(11): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FiberTop E, ISOGARD HD Minimum ½" thick	**14 and 1**	**1:2.7 ft^2**
DensDeck, DensDeck Prime Minimum ¼" thick	**14 and 1**	**1:2.7 ft^2**
Plywood Minimum 19/32" thick	**14 and 1**	**1:2.7 ft^2**

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -75 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners and ¾" washers spaced 6" o.c. (two fasteners installed at each bearing attachment point) and Traxx 1 fasteners 12" o.c. at the side laps

System Type C (12): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Prime Minimum ½" thick	**1&7 or 5 or 2&7**	**1:1.33 ft^2**

Membrane: UltraPly TPO membrane fully adhered to the cover board with UltraPly Bonding Adhesive at a rate of 60 sq.ft./gal per side. (Coverage area is for adhesive application onto each of the two mating surfaces). The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -75 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 gauge, Type B steel deck attached to ¼" steel structural supports spaced a maximum 6ft o.c. secured with ITW Buildex Traxx 5 fasteners spaced maximum 6" o.c. at supports. Side laps, secured 24" o.c. with ITW Buildex TRAXX 1 fasteners.

System Type C(13): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 2" thick	**1&7 or 4**	**1:1.6 ft^2**

Note: Insulation layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to insulation with UltraPly Bonding Adhesive at a rate of 60 sq.ft./gal per side. (Coverage area is for adhesive application onto each of the two mating surfaces). The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -75 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(14): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FiberTop E, ISOGARD HD **Minimum ½" thick**	**14 with 1**	**See Design Pressure**
DensDeck, DensDeck Prime **Minimum ¼" thick**	**14 with 1**	**See Design Pressure**
Plywood **Minimum 19/32" thick**	**14 with 1**	**See Design Pressure**

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 3 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure:	**Maximum Pressure**	**Fastener Spacing**	**Fastener Row Spacing**
	-82.5 psf. (See General Limitation #7)	6 in.	5 ft.

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(15): Membrane adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 2" thick	**1 or 2 with 7**	**1:1.6 ft^2**

Note: Insulation layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 6" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 gauge, Type B steel deck secured to ¼" steel structural supports spaced a maximum 6ft o.c. secured with ITW Buildex Traxx 5 fasteners spaced maximum 6" o.c. at supports. Side laps, secured 24" o.c. with ITW Buildex TRAXX 1 fasteners.

System Type C(16): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**2&7 or 4**	**1:1.33 ft^2**

Note: Insulation layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to insulation with UltraPly Bonding Adhesive at a rate of 60 sq.ft./gal per side. (Coverage area is for adhesive application onto each of the two mating surfaces). The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -90 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fasteners installed at each bearing attachment point) and Traxx 1 fasteners 12" o.c. at the side laps.

System Type C(17): Membrane bonded over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FiberTop E, ISOGARD HD Minimum ½" thick	**14 and 1**	**1:2 ft^2**
DensDeck, DensDeck Prime Minimum ¼" thick	**14 and 1**	**1:2 ft^2**
Plywood Minimum 19/32" thick	**14 and 1**	**1:2 ft^2**

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 6 in. wide roof cover side laps are sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -105 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22ga., Type B, Grade 33 Steel Deck secured to ¼" thick supports spaced maximum 6 ft. o.c. with Traxx/5 fasteners spaced 6"o.c. at supports (two fasteners at each bearing attachment point). Side laps secured with Traxx/1 fasteners at 24"o.c.

System Type C(18): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 2" thick	**1&7 or 2&7**	**1:1 ft^2**

Note: Insulation layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the cover board with UltraPly Bonding Adhesive at a rate of 60 sq.ft./gal per side. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressures: -112.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(19): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD Composite Minimum 1.5" thick	**1&7 or 2&7**	**1: 1.33 ft^2**

Note: Insulation layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft^2 /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -112.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(20): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD Composite Minimum 2" thick	**1&7 or 2&7**	**1: 1.33 ft^2**

Note: Insulation layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive applied to both the substrate and the underside of the roof cover for a combined rate of 120 ft^2 /gal. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -120 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fastener installed at each bearing attachment point) and Traxx 1 fasteners 12" o.c. at the side laps.

System Type C(21): Membrane adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 2" thick	**1 or 2 with 7**	**1:1 ft^2**

Note: Insulation layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO XR 100 or UltraPly TPO XR 115 membrane adhered to the top insulation layer with XR Stick Membrane Adhesive applied in continuous ¾" – 1" wide ribbons spaced 4" o.c. The 2 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -142.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fasteners installed at each bearing attachment point) and Traxx 1 fasteners 12" o.c. at the side laps.

System Type C(22): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL		
Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (cover board)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Plywood		
Minimum 19/32" thick	**1&7 or 5**	**1:1 ft^2**

Membrane: UltraPly TPO membrane fully adhered to the cover board with UltraPly Bonding Adhesive at a rate of 60 sq.ft./gal per side. (Coverage area is for adhesive application onto each of the two mating surfaces). The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -150 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22ga., Grade 80 Steel Deck secured to ¼" thick supports spaced maximum 6 ft. o.c. with Traxx/5 fasteners spaced 6"o.c. at supports (two fasteners at each bearing attachment point). Side laps secured with Traxx/1 fasteners at 24"o.c.

System Type C(23): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 2" thick	**1&7 or 2&7**	**1:1 ft^2**

Note: Insulation layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: UltraPly TPO membrane fully adhered to the cover board with UltraPly Bonding Adhesive at a rate of 60 sq.ft./gal per side. The roof cover side and end laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressures: -150 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga. (0295") minimum steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(24): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+GL		
Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD		
Minimum ½" thick	**1 & 7 or 2 & 7**	**1:1.33 ft^2**

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga. (0295") minimum steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(25): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD Composite Minimum 1" thick	**1 & 7 or 2 & 7**	**1:1.33 ft^2**

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga. (0295") minimum steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(26): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD Composite Minimum 1.5" thick	**1 & 7 or 2 & 7**	**1:1.33 ft^2**

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -112.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga. (0295") minimum steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(27): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISOGARD HD Minimum 2" thick	**1 & 7 or 2 & 7**	**1:1.33 ft^2**

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -120 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga. (0295") minimum steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fasteners installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(28): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
RESISTA		
Minimum 2" thick	**1 & 7 or 2 & 7**	**1:1 ft^2**

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -112.5 psf. on Grade 33 steel deck (See General Limitation #7)
-150 psf. on Grade 80 steel deck (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga. (0295") minimum steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (two fasteners installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(29): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
RESISTA		
Minimum 2" thick	**1 & 7 or 2 & 7**	**1:1.6 ft^2**

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga. (0295") minimum steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(30): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
RESISTA		
Minimum 2" thick	**1 & 7 or 2 & 7**	**1:1.33 ft^2**

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -105 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga. (0295") minimum steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type C(31): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
RESISTA		
Minimum 1.5" thick	**1 & 7 or 2 & 7**	**1:1.6 ft^2**

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 60 ft^2/gallon (120 ft2/gallon to both the underside of membrane and the substrate). The 3 in. wide roof cover side and end laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap. Top surface of roof cover is then broomed to ensure contact.

Maximum Design Pressure: -75 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga. min. steel B-deck is secured to supports spaced 6 ft. o.c. with 5/8" diameter puddle welds spaced 6" o.c. at each flute and side laps stitched 12" o.c. with ¼" – 14 x 7/8" HWH screws with ½" washer

System Type C(32): All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**2 & 7**	**1:1.77 ft^2**

Note: All layers shall be simultaneously fastened. See top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: UltraPly TPO membrane fully adhered to the top insulation layer with UltraPly Bonding Adhesive roller applied at a rate of 45-60 ft^2/gallon. The 2 in. wide roof cover side laps are sealed with a minimum 1.5 in. heat weld on the outside edge of the lap.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 80 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 4 or 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type D(1): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95 +GL Minimum ½" thick	**N/A**	**N/A**
RESISTA Minimum 1" thick	**N/A**	**N/A**
ISOGARD HD Composite Minimum 2" thick	**N/A**	**N/A**
(Optional)Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FiberTop E, ISOGARD HD Minimum ½" thick	**N/A**	**N/A**
DensDeck, SECUROCK Glass-Mat, SECUROCK Gypsum-Fiber Minimum ¼" thick	**N/A**	**N/A**

Note: All layers of insulation and membrane shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane.

Membrane: UltraPly TPO (.060" min.) mechanically fastened to the deck through the insulation using Heavy Duty Fasteners and HD Seam Plates spaced 12" o.c. along the seam within minimum 6" wide roof laps. Fastener rows are spaced at maximum 90" o.c. and sealed with a minimum 1.5 in. wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. and Traxx 1 fasteners 24" o.c. at the side laps

System Type D(2): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers of insulation and membrane shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane.

Membrane: Mechanically attach UltraPly QuickSeam R.M.A. Strips with Heavy Duty Fasteners 6" o.c. in Coiled Metal Batten Strip centered within the 4" wide center section of the UltraPly QuickSeam R.M.A Strips in rows 10 ft. o.c. UltraPly TPO roof cover is adhered to the UltraPly QuickSeam R.M.A. Strips by first priming the underside of the roof cover, at the strip locations, with Single-Ply QuickPrime Primer and placing the primed portion of the roof cover onto the strips. Minimum 2" wide side laps are sealed with a minimum 1.5" wide heat weld.

Or mechanically attach UltraPly TPO membrane with Heavy Duty Plus fasteners 12" o.c. in ¾" or 1" Polymer Batten Strip centered within the 6" wide side laps in rows 9-½ ft. o.c. The roof cover laps are sealed with a minimum 5" heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. Grade E steel deck secured to supports space at maximum 6 ft. o.c. with ITW Buildex Traxx/5 spaced at 6" o.c. Side lap fastened with ITW Buildex Traxx/1 spaced at 24" o.c.

System Type D(3): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum ½" thick	**N/A**	**N/A**
RESISTA Minimum 1" thick	**N/A**	**N/A**
ISOGARD HD Composite Minimum 2" thick	**N/A**	**N/A**
(Optional)Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
SECUROCK Glass-Mat, SECUROCK Gypsum-Fiber, DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**
FiberTop E, ISOGARD HD, Approved High Density Wood Fiber, Georgia-Pacific High Density Roof Fiberboard Minimum ½" thick	**N/A**	**N/A**

Note: All layers of insulation and membrane shall be simultaneously attached. See membrane below for fasteners and density. All insulation shall have preliminary attachment, prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Barrier: None.

Membrane: UltraPly TPO (45-80 mils) Reinforced Membrane attached to deck through the preliminary attached insulation as specified below.

Fastening: Membrane is mechanically attached using Heavy Duty Fasteners and HD Seam Plates spaced 6" o.c. within minimum 6" wide laps. Laps are spaced at maximum 114" o.c. and sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 33 steel deck is secured to supports spaced 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. (one fastener installed at each bearing attachment point) and Traxx 1 fasteners 24" o.c. at the side laps.

System Type D(4): Membrane mechanically fastened to insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ISO 95+ GL Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers of insulation and membrane shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane.

Membrane: UltraPly TPO roof cover is attached to the deck with Heavy Duty Plus fasteners and HD Plus seam plates spaced 6 in. o.c. within the 6 in. wide side laps. Fastener rows are spaced 114 in. o.c. The roof cover side laps are sealed with a 1.5 in. wide heat weld placed along the outside edge of the lap.

Maximum Design Pressure: –60 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. Grade E steel deck secured to supports space at maximum 6 ft. o.c. with ITW Buildex Traxx/5 spaced at 6" o.c. (one fastener installed at each bearing attachment point) Side lap fastened with ITW Buildex Traxx/1 spaced at 30" o.c.

System Type D(5): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL		
Minimum 1.5" thick	**N/A**	**N/A**
(Optional) Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL		
Minimum 1.5"thick	**N/A**	**N/A**
Tapered ISO 95+ GL		
Minimum ½" thick with a ¼" per ft. taper	**N/A**	**N/A**
FiberTop E, ISOGARD HD, Georgia-Pacific High Density Roof Fiberboard		
Minimum ½" thick	**1, 14, and 7**	**1:2 ft^2**
DensDeck Prime		
Minimum ¼" thick	**1, 14, and 7**	**1:2 ft^2**

Note: All insulation plates are secured to the deck with Insulation Fastener listed above (1). Insulation plates are placed in four rows. The first row of plates are placed 6 in. from the 8 ft. long edges of the board with subsequent rows of plates placed 12 in. o.c. The first plate of each row is placed 12in. from the 4 ft. long edges of the board with subsequent plates placed 24 in. o.c. The rows of plates securing the insulations boards shall consist of alternating rows of Insulation Fasteners listed above (14 and 7).

Membrane: UltraPly TPO is bonded to the UltraPly TPO InvisiWeld Plates using a RhinoBond Portable Bonding Tool and weighted RhinoBond Cooling Clamps. The minimum 6" wide roof cover side laps are sealed with a minimum 1.5" wide heat weld on the outside edge of the lap.

Maximum Design Pressure: -67.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., type B steel decking attached to steel supports spaced 6 ft. o.c. using Traxx 5 fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached using Traxx 1 fasteners spaced 24" o.c.

System Type D(6): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers of insulation and membrane shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane.

Membrane: UltraPly TPO mechanically fastened to the deck through the insulation as described below:

Fastening #1: Membrane is mechanically attached using Heavy Duty Plus Fasteners and HD Plus Seam Plates spaced 6" o.c. within minimum 6" wide laps. Laps are spaced at maximum 142" o.c. and sealed with a minimum 1.5" heat weld.
Maximum Design Pressure: -60 psf. (See General Limitation #7)

Fastening #2: Membrane is mechanically attached using Heavy Duty Plus Fasteners and 1" wide Coiled Metal Batten Strip with fasteners spaced 6" o.c. along the batten bar within minimum 6" wide laps. Laps are spaced at maximum 142" o.c. and sealed with a minimum 5" wide heat weld that encapsulates the fasteners and batten strip.
Maximum Design Pressure: -60 psf. (See General Limitation #7)

Fastening #3: Membrane is mechanically attached using Heavy Duty Plus Fasteners and HD Plus Seam Plates spaced 6" o.c. within minimum 6" wide laps. Laps are spaced at maximum 114" o.c. and sealed with a minimum 1.5" heat weld.
Maximum Design Pressure: -67.5 psf. (See General Limitation #7)

Fastening #4: Membrane is mechanically attached using Heavy Duty Plus Fasteners and 1" wide Coiled Metal Batten Strip with fasteners spaced 6" o.c. along the batten bar within minimum 6" wide laps. Laps are spaced at maximum 114" o.c. and sealed with a minimum 5" wide heat weld that encapsulates the fasteners and batten strip.
Maximum Design Pressure: -67.5 psf. (See General Limitation #7)

Maximum Design Pressure: See Fastening Options Above

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 gauge Grade C steel deck secured to supports space at maximum 6 ft. o.c. with ITW Buildex Traxx/5 spaced 6" o.c. Side laps fastened with ITW Buildex Traxx/1 spaced 24" o.c.

System Type D(7): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**

(Optional) Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck **Minimum ¼" thick**	**N/A**	**N/A**
FiberTop E, Approved High Density Wood Fiber, Georgia-Pacific High Density Roof Fiberboard **Minimum ½" thick**	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment, prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four (4) fasteners for any insulation board having no dimension greater than 8 ft.

Barrier: None.

Membrane: UltraPly TPO (45-80 mils) Reinforced Membrane attached through the preliminary attached insulation as described below.

Fastening #1: Membrane is mechanically attached using Heavy Duty Plus Fasteners and HD Plus Seam Plates spaced 12" o.c. within minimum 6" wide laps. Laps are spaced at maximum 90" o.c. and sealed with a minimum 1.5" heat weld.
(Maximum Design Pressure:-45 psf.; See General Limitation #7.)

Fastening #2: Membrane is mechanically attached using Heavy Duty Plus Fasteners and 1" metal batten centered within minimum 6" wide laps. Fasteners are spaced 6" o.c. along the batten bar. Batten bar rows are spaced 90" o.c. and sealed with a minimum 5" heat weld.
(Maximum Design Pressure:-82.5 psf.; See General Limitation #7.)

Fastening #3: Membrane is mechanically attached using Heavy Duty Plus Fasteners and HD Plus Seam Plates spaced 6" o.c. within minimum 6" wide laps. Laps are spaced at maximum 90" o.c. and sealed with a minimum 5" heat weld.
(Maximum Design Pressure:-82.5 psf.; See General Limitation #7.)

Maximum Design Pressure: See Fastening Options Above

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. Grade E steel deck secured to supports space at maximum 6 ft. o.c. with ITW Buildex Traxx/5 spaced at 6" o.c. Side lap fastened with ITW Buildex Traxx/1 spaced at 24" o.c.

System Type D(8): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**
(Optional) Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck **Minimum ¼" thick**	**N/A**	**N/A**
FiberTop E, Approved High Density Wood Fiber, Georgia-Pacific High Density Roof Fiberboard **Minimum ½" thick**	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment, prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Barrier: None.

Membrane: UltraPly TPO Reinforced Membrane attached to deck through the preliminary attached insulation as specified below.

Fastening #1: Membrane is mechanically attached using Heavy Duty Plus Fasteners and HD Plus Seam Plates spaced 12" o.c. within minimum 6" wide laps in rows 9'-6"o.c. Laps sealed with a minimum 5" wide hot air heat weld.
(Maximum Design Pressure:-45 psf.; See General Limitation #7.)

Fastening #2: Membrane is mechanically attached using Heavy Duty Fasteners and 1" wide Metal Batten Bars centered within the 6" wide side laps. Fasteners spaced 6" o.c. along the batten bar. Batten bar rows were spaced 9'-6" o.c. Laps sealed with a minimum 5" wide hot air heat weld.
(Maximum Design Pressure:-75 psf.; See General Limitation #7.)

Fastening #3: Membrane is mechanically attached using Heavy Duty Fasteners and 3/4" wide Polymer Batten Strips centered within the 6" wide side laps. Fasteners spaced 6" o.c. along the batten bar. Batten bar rows were spaced 9'-6" o.c. Laps sealed with a minimum 5" wide hot air heat weld.
(Maximum Design Pressure:-60 psf.; See General Limitation #7.)

Fastening #4: Membrane is mechanically attached using Heavy Duty Plus Fasteners and 3/4" wide Polymer Batten Strips centered within the 6" wide side laps. Fasteners spaced 6" o.c. along the batten bar. Batten bar rows were spaced 9'-6" o.c. Laps sealed with a minimum 5" wide hot air heat weld.

(Maximum Design Pressure:-75 psf.; See General Limitation #7.)

Fastening #5: Membrane is mechanically attached using Heavy Duty Fasteners and HD Seam Plates 12" o.c. within minimum 6" wide laps. Laps are spaced 90" o.c. and sealed with minimum 1.5" heat weld.

(Maximum Design Pressure:-45 psf.; See General Limitation #7.)

Fastening #6: Membrane is mechanically attached using Heavy Duty Plus Fasteners and HD Plus Seam Plates spaced 12" o.c. within minimum 6" wide laps. Laps are spaced a maximum 114" o.c. and scaled with minimum 1.5" heat weld.

(Maximum Design Pressure:-45 psf.; See General Limitation #7.)

Fastening #7: Membrane is mechanically attached using Heavy Duty Plus Fasteners and HD Plus Seam Plates spaced 6" o.c. within minimum 6" wide laps. Laps are spaced at maximum 90" o.c. and sealed with minimum 5" heat weld.

(Maximum Design Pressure:-90 psf.; See General Limitation #7.)

Fastening #8: Membrane is mechanically attached using Heavy Duty Plus Fastener and 1" Metal Battens centered with the minimum 6" wide laps. Fasteners are spaced 6" o.c. along the batten bars. Batten rows are spaced at maximum 90" o.c. and sealed with minimum 5" heat weld.

(Maximum Design Pressure:-97.5 psf.; See General Limitation #7.)

Maximum Design Pressure: See Fastening Options Above

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., type B steel decking attached to steel supports spaced 6 ft. o.c. using Traxx 5 fasteners spaced 6" o.c. (at the bottom flute) two fasteners at each bearing attachment point, and with side laps attached using Traxx 1 fasteners spaced 14" o.c.

System Type D(9): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck, DensDeck Prime Minimum ½" thick	**N/A**	**N/A**

Note: All layers of insulation and membrane shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane.

Membrane: UltraPly TPO mechanically fastened to the deck through the insulation as described below:

Fastening: Heavy-Duty Plus fasteners spaced 6 in. o.c. along 1" wide Coiled Metal Batten Strip centered within the 6 in. wide laps spaced 4-½ ft. o.c. The roof cover side laps are sealed with a minimum 5 in. wide heat weld.

Maximum Design Pressure: -112.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Grade 80 steel decking attached to steel supports spaced 6 ft. o.c. using Traxx 5 fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached using Traxx 1 fasteners spaced 24" o.c.

System Type D(10): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers of insulation and membrane shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane.

Membrane: UltraPly TPO mechanically fastened to the deck through the insulation as described below:

Fastening #1: Membrane is mechanically attached using Heavy Duty Fasteners and HD Seam Plates spaced 6" o.c. within minimum 6" wide laps. Laps are spaced at maximum 142" o.c. and sealed with a minimum 1.5" heat weld.
Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Fastening #2: Membrane is mechanically attached using Heavy Duty Fasteners and 1" wide Coiled Metal Batten Strip with fasteners spaced 6" o.c. along the batten bar within minimum 6" wide laps. Laps are spaced at maximum 142" o.c. and sealed with a minimum 5" wide heat weld that encapsulates the fasteners and batten strip.
Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Fastening #3: Membrane is mechanically attached using Heavy Duty Plus Fasteners and ¾" or 1" Polymer Batten Strips with fasteners spaced 6" o.c. along the batten bar in rows spaced 142" o.c. and along one intermediate field row centered in the field of the sheet. Side laps are sealed with a minimum 5" heat weld and the intermediate field row is covered with a minimum 5" wide strip of UltraPly TPO and sealed with a minimum 1.5" heat weld on either side of the batten.
Maximum Design Pressure: -135 psf. (See General Limitation #7)

Fastening #4: Membrane is mechanically attached using Heavy Duty Fasteners and ¾" or 1" Polymer Batten Strips with fasteners spaced 6" o.c. along the batten bar within minimum 6" wide laps. Laps are spaced at maximum 68" o.c. and sealed with a minimum 5" wide heat weld that encapsulates the fasteners and batten strip.
Maximum Design Pressure: -82.5 psf. (See General Limitation #7)

Maximum Design Pressure: See Fastening Options Above

Membrane Type: Single Ply, TPO, Reinforced

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga.min. steel B-deck is secured to supports spaced 6 ft. o.c. with 5/8" diameter puddle welds spaced 6" o.c. at each flute and side laps stitched 12" o.c. with ¼" – 14 x 7/8" HWH screws with ½" washer.

System Type D(11): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL **Minimum ½" thick**	**N/A**	**N/A**
RESISTA **Minimum 1" thick**	**N/A**	**N/A**
ISOGARD HD Composite **Minimum 2" thick**	**N/A**	**N/A**
(Optional) Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FiberTop E, ISOGARD HD **Minimum ½" thick**	**N/A**	**N/A**
DensDeck, SECUROCK Glass-Mat, SECUROCK Gypsum-Fiber **Minimum ¼" thick**	**N/A**	**N/A**

Note: All layers of insulation and membrane shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane.

Membrane: UltraPly TPO (.060" min.) mechanically fastened to the deck through the insulation using Heavy Duty Fasteners and HD Seam Plates spaced 6" o.c. along the seam within minimum 6" wide laps. Laps are spaced at maximum 114" o.c. and sealed with a minimum 1.5" wide heat welds.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

STEEL DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117 and/or RAS 137, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer.
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
   Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. Insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117 and/or RAS 137. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9N-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE